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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,114	09/20/2001	Andrew Bartlett	MCA-460 PC/US	4663
25182	7590	05/17/2004	EXAMINER	
MILLIPORE CORPORATION 290 CONCORD ROAD BILLERICA, MA 01821			MENON, KRISHNAN S	
			ART UNIT	PAPER NUMBER
			1723	

DATE MAILED: 05/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/937,114

Applicant(s)

BARTLETT ET AL.

Examiner

Krishnan S Menon

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-15,18,19 and 27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-15,18,19 and 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1723

DETAILED ACTION

Claims 1,2,4-15, 18,19 and 27 are pending.

Claim Rejections - 35 USC § 112

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. While there is disclosure for the gasket formed through the screen (feed or filtrate screen) in page 6, 3rd and 4th paragraph, and figures 1,2, 4 and 6, the newly added element in the amended claim 1, "said means being formed through the filter", does not seem to have disclosure in the specification or claims as originally filed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 1723

1. Claims 2,4 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Towe et al (US 6,235,166 B1).

Towe teaches a screen containing a plurality of openings along the periphery (20, 22,28) screen (18) of uniform thickness, seal around the openings formed through the screen (see 20,22 and 28), seal a thermoplastic elastomeric material as in claim 2 and 4 (see fig 2a, and col 6 lines 5-20. See also col 2 lines 44-63). Injection molded as in claim 9 (see abstract).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1,2, 4-15,18 and 19 are rejected under 35 USC 103(a) as unpatentable over Pearl et al (US 5,824,217) in view of Towe et al (US 6,235,166 B1).

Pearl (217) discloses a filtration device with one or more layers (fig 4) with openings in each layer (28,30-fig 4), and means for establishing leak-tight seal around each of the openings (13,15,21,25-fig 4) with thermoplastic polymer material (col 4 lines 12-19); means being integral and formed around the openings with thickness greater than the filter and extends from at least one side (col 4 lines 25-41; figures 1,4) as in instant claim 1.

Art Unit: 1723

Re the limitation "said means being formed through", this language is product by process, and "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re *Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Also, col 4 lines 25-30 of Pearl teaches insert molding of the polymer "... around and selectively into the layers ...", which means the material flows through the layers.

Pearl does not specifically teach thermoplastic elastomers for the seal material. Towe teaches thermoplastic elastomers for the seal material around the holes and the periphery of the screen (see abstract, col 6 lines 5-20), and "through the screen" (see fig 2a – holes 28 and around the edge of the screen 18). It would be obvious to one of ordinary skill in the art at the time of invention to use the teaching of Towe in the teaching of Pearl for the seal material because the thermoplastic elastomer taught by Towe provides improved seal at high temperature and chemical resistance and is compatible with the screen/filter material for melt processing.

Pearl (217) in view of Towe (166) teaches a feed screen with plurality of openings having molded gasket of thermoplastic polymer (col 4 lines 12-19) rim, which is thicker than the screen (64-fig 5; col 5 lines 56-65), integral and around the rim (col 4 lines 25-41; figures 1 and 4) as in instant claim 2, and formed by injection molding (col 1

Art Unit: 1723

lines 7-11) as in instant claim 9. Thermoplastic and 'through the screen' as in claims 2 and 4 is taught by Towe.

Pearl (217) in view of Towe (166) teaches a filtration module comprising a membrane, a feed screen and a permeate screen, each with ports on their edges, entrance and exits for the feed and permeate streams, with the screen layers having integrally injection molded gaskets thicker than the screens and extending from both sides of the screen (fig 4, 5; col 4 lines 12-19, col 1 lines 7-11; col 5 lines 56-65) as in instant claims 10, 13 and 15. The gasket material is thermoplastic elastomer (see Towe), and polygonal in shape (fig 5) as in instant claim 14.

Please note re the limitation "integral" in the instant claims: "...the use of a one piece construction instead of the structure disclosed in [the prior art] would be merely a matter of obvious engineering choice" (*In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965))

Claims 5-8, 11, 12, 18 and 19 add further limitation of extension of the gasket above the screen (or its thickness). While Pearl and Towe teaches the extension of the gasket above the plane of the screen (see 34-fig 2a of Towe or 9-fig 1 of Pearl), the actual dimensions of the extension is not taught by either reference. However, it would be obvious to one of ordinary skill in the art at the time of invention to provide sufficient height of the gasket above the screen on both sides to provide effective seal and to have sufficient spacing between the feed/permeate channels and the membrane, which is provided by the height of the gasket, and the actual thickness would depend on the flow rate. The same reasoning is good for the use of the gasket to vary the channel

Art Unit: 1723

height as in claims 18 and 19. Discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art. *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980); *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); *In re Aller*, 42 CCPA 824, 220 F.2d 454, 105 USPQ 233 (1955).

2. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe (US 4,631,130).

Watanabe teaches a filtration device comprising a filter cartridge having a recess formed around a circumference (see 22, 23 – fig 2; col 7 line 68- col 8 line 6) having an elastomeric seal as in the instant claim. Re the integral seal: "...the use of a one piece construction instead of the structure disclosed in [the prior art] would be merely a matter of obvious engineering choice" (*In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965))

Response to Arguments

Re claim 27, the argument that the Watanabe ref is a classic case of O rings that could potentially get displaced or leave recesses available for bacterial growth: the O-rings in fig 2 of the ref appear to be integral, even though the ref does not specifically say so, and the figure shows no gaps and the O-rings seem to fill in the recesses completely. Counter to the argument that there is nothing in the ref to show that the O-rings could be formed in the recesses directly: there is also nothing in the reference that teaches that O-rings could not be formed in the recesses directly.

Art Unit: 1723

Rest of the arguments are moot because of the new grounds for rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S Menon whose telephone number is 571-272-1143. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1723

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Krishnan Menon
Patent Examiner


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